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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/516,913 | 06/03/2005 | Serge Baumert | 0512-1244 | 8630 |
| 465 7590 09/08/2009 YOUNG & THOMPSON 209 Madison Street Suite 500 ALEXANDRIA, VA 22314 | | | EXAMINER LE, MARK T | |
| | | | ART UNIT 3617 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/516,913

Applicant(s)

BAUMERT ET AL.

Examiner

MARK T. LE

Art Unit

3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2 and 4-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-2, 4-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

DETAILED ACTION

1. This communication is responsive to the RCE, filed on August 4, 2009. Applicant's amendments and remarks have been carefully considered.
2. Claims 1-2, 4-9, 11-17, 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kais (US 6,177,205) in view of Bhadeshia (US 5,879,474).

Kais discloses a stretch of rail comprising switch element 12 made of high alloy steel including manganese content of 10-20%, connected directly to the lengths of carbon steel rails 14,16 by welding without deposition of metal (see for example claim 1 of Kais patent). It is noted that Kais does not disclose the specific material composition of the carbon steel rails as recited in the instant claims.

Bhadeshia, column 3, second paragraph, describes bainitic steel rail without carbide or carbide-free; wherein, the steel rail having the material composition as recited in instant claims.

In view of Bhadeshia, it would have been obvious to one skilled in the art to use bainitic steel rails with material composition similar to that taught by Bhadeshia, in the structure of Kais so as to achieve expected advantages, such as higher structural integrity and enhanced weldability.

Regarding the instant claimed method of welding being in the form of flash welding and forging, as recited in instant claim 8, note that on the one hand, the instant claimed method of welding and forging does not present a patentable significant in an apparatus claim, i.e. claim 8; and on the other hand, flash butt welding and forging and electron-beam welding are known forms of welding as described in the first three

paragraphs of column 4 of Kais, and it would have been obvious to one skilled in the art to use either form of welding for forming the track of Kais so as to achieve the expected benefit of the selected form of welding.

Regarding the method step including no heat treatment, as recited in instant claim 9, note that the instant method step does not present a patentable significant in an apparatus claim, i.e. claim 9. Further, it would have been obvious to one skilled in the art avoid or remove an extra step, such as heat treatment, along with the expected benefit thereof in the structure of Kais because such benefit may not be critical or needed in certain light rail applications. On the other hand, the intermediate product before the heat treatment of Kais is readable as being without or no heat treatment.

Regarding the instant claimed hardness of the medium-alloy low-carbon steel, as recited in instant claim 11, consider the hardness of bainitic steel shown in the table on top of the last page of Bhadeshia, which includes hardness of 400 HV30 within the range of 350-390HB as claimed. Note that the length of rail of Kais, as modified above, is made from the bainitic steel having hardness similar to that of Bhadeshia.

3. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 1 above, and further in view of the prior art described in the last six lines of page 3 of the instant specification.

Regarding the instant claimed switch element having hardness between 170 and 230HB, as recited in instant claim 10, it is noted that Kais does not disclose the specific hardness of the switch element. In the last six lines of page 3 of the instant specification, there is a switch element made of a material, which is similar to that of

Kais, that is well known under the name of HADFIELD and has hardness between 170 and 230 HB. Therefore, it would have been obvious to one skilled in the art to use a material having similar hardness to that of the prior art switch element described in the instant specification, for forming the switch element of Kais so as to achieve the expected structural integrity thereof.

4. Responses to Applicant's argument: The examiner agrees with Applicant in that there are the differences between the steel composition of Kais and the bainitic steel recited in the instant claims. However, note that the above grounds of rejection are not based on Kais alone but rather in combination with Bhadeshia; therefore, Applicant's arguments that Kais does not have the steel structure or the properties of the steel of the instant claimed invention are not deemed to be relevant. The examiner still maintains that the stretch of rail resulted from the combination of Kais and Bahdeshia or Kais, Bahdeshia, and the prior art described in the instant specification meets all of the limitations as defined in the instant claims.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK T. LE whose telephone number is (571)272-6682. The examiner can normally be reached on Mon-Fri, between 8:15-4:45 (Teleworking).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Le/
Primary Examiner
Art Unit 3617

mle
9/3/09